

28 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS

Asterisks (*) indicate problems that have partial answers given in Appendix G.

28.1 Describe the concept of layers in a geographic information system.

From Section 28.1, Paragraph 4:

A generalized concept of how data of different types or “layers” are collected and overlaid in a GIS is illustrated in Figure 28.1. In that figure, maps A through G represent some of the different layers of spatially related information that can be digitally recorded and incorporated into a GIS database, and include parcels of different land ownership A, zoning B, floodplains C, wetlands D, land cover E, and soil types F. Map G is the geodetic reference framework, consisting of the network of survey control points in the area. Note that these control points are found in each of the other layers thereby providing the means for spatially locating all data in a common reference system. Thus composite maps that merge two or more different data sets can be accurately created. For example in Figure 28.1, bottom map H is the composite of all layers

28.2 Discuss the role of a geographic reference framework in a GIS.

From Section 28.1, Paragraph 4:

It allows the user to relate information on different layers of the GIS